

economic profile of India's middle-class urban youth, who are becoming leading members of the global economy equipped with marketable skills.

These are just some of the pressing concerns for students at religious seminaries such as Darul Uloom.²⁴ One of the main reasons for the shortage of funds is that they depend on donations from the Muslim community. Darul Uloom and Darul Uloom Waqf, the two leading seminaries in Deoband, do not receive financial help from the Indian government as they believe this would dilute their institutional autonomy and control. Some scholars want administrative reforms at these seminaries, striking the right balance between institutional autonomy and accountability. They suggest having flexibility in curriculum by offering technical courses and English-language training.²⁵

This ongoing ideological battle between scholars at Deoband and the forces of Islamist extremism will shape events in South Asia, particularly in the Pashtun belt, for years to come. The outcome is nothing less than the legacy of Deobandi Islam.

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Maintaining the Message: How Jihadists Have Adapted to Web Disruptions

By Manuel R. Torres Soriano

SINCE THE SEPTEMBER 11 attacks on the United States, the internet has become a hostile domain for jihadists.¹ The internet is increasingly monitored by government and non-government entities that seek to disrupt jihadist communications and reduce the presence of jihadist material on the web. Jihadists have been forced to adapt to this mounting pressure by copying the practices of internet "pirates" who distribute illegal materials such as copyrighted music, movies, software and illicit pornography. These practices have allowed jihadists to continue their communications and propaganda activities. Today, jihadists have been inspired by websites of the most diverse character. Their goals are to enhance the visual appearance and accessibility of their content, and improve website security and reliability.

This article explains how jihadists have adapted to attempts to shut down their websites and disrupt their communications. Jihadists are increasingly using file-hosting websites and web forum software to sustain the accessibility of their content on the internet. These new technologies have allowed them to avoid some of the main weaknesses that have affected their operations in recent years.

The Search for a More Efficient and Stable Presence on the Web

In the early years of jihadist online activity, many groups created their own websites with the intention to broadcast announcements, videos of

their operations, speeches by their leaders, and other material of interest.² Jihadist groups, however, had a difficult time maintaining a steady online presence.³ Various governments and other actors concentrated their efforts on shutting down a small group of websites connected to major terrorist organizations, such as al-Qa`ida. Al-Qa`ida's official alneda.com website, for example, suffered incessant harassment after the September 11 attacks, and the site was taken offline. Major terrorist groups were forced to continuously establish new domain names and use different web hosts to keep their sites operational.⁴

This practice, however, also became unsustainable. Changing web hosting companies required payment, which was a problem for jihadist groups since it created a paper trail. To bypass this vulnerability, jihadist users paid with stolen credit cards. Again, however, this process was not practical; their website account only remained active until the fraud was discovered by the credit card's legitimate owner, and the hosting company would then shut down the account. The jihadists were then forced to start the process all over again.

To avoid these limitations, jihadists tried hosting their websites using free web hosting companies such as Geocities.com and Yahoo.com. These companies offered free web hosting to any user who supplied a valid e-mail address. Yet since the services were free, the companies only offered a limited amount of monthly data transfer. As a result, when a jihadist website became popular, it exceeded its data transfer quota and the site was subsequently suspended. Jihadist websites, in effect, died from success.

1 This article uses the term "jihadists" to include individuals physically participating in the activities of terrorist groups, but also to individuals sympathetic to the goals of jihadist terrorist groups. This latter category of "jihadists" may have no physical connection to terrorist groups, and may have no intention of physically taking part in terrorist attacks or plots, but still participates in web forums promoting jihadist interests. These users help to spread jihadist propaganda and maintain jihadist websites, which makes them relevant for this article's discussion.

2 Evan Kohlmann, "The Real Online Terrorist Threat," *Foreign Affairs* 85:5 (2006).

3 There is not an exact number of websites of jihadist inspiration. The estimates tend to oscillate between 5,000 websites, suggested by the Israeli professor Gabriel Weimann, and 50,000 according to the data of an automatic inquiry completed by a group of researchers at the Artificial Intelligence Laboratory of the University of Arizona under the project "Dark Web Terrorism Research."

4 Brynjar Lia, "Al-Qaeda Online: Understanding Jihadist Internet Infrastructure," *Jane's Intelligence Review*, January 1, 2006.

24 Personal interviews, students at Darul Uloom and Darul Uloom Waqf, Deoband, India, July 2009.

25 Some of the Deobandi scholars who argued for institutional reforms did not want to be quoted.

Another strategy was to hack into legitimate websites (generally of U.S.-based institutions and companies, due to their performance reliability) and store jihadist-related content on their servers. This “parasite” strategy was useful when the goal was the rapid dissemination of files among a radicalized audience, who would be notified of the files’ location via e-mail lists. The content could then be downloaded and multiplied on hundreds of new websites before the hacking action was discovered and removed. Yet this process was progressively abandoned due to the fact that website security has increased dramatically over time, and businesses have become more aware of the threat. Continuing the hacking process in this environment requires more advanced technology capabilities, which most jihadists simply do not possess.

As a result, the strategy of creating official websites was largely discarded and an alternative strategy adopted.⁵ To overcome these obstacles, jihadists evolved toward a more horizontal and diffuse presence on the internet based on the labor of a network of volunteers. The foundation of this strategy is internet web forums.⁶ Forums present a series of useful functions for jihadist groups. Moreover, they have become essential tools in the diffusion of propaganda. The forums are especially attractive due to the ease in which they can be designed and managed.⁷

The main utility of web forums is that they promote the spontaneous participation of their members, which has resulted in sites that “live and breathe” and therefore are constantly growing and changing. Administering

5 This is not true of all terrorist groups. Some terrorist groups not directly linked to the global jihad (for example, organizations part of the Iraqi insurgency) have been able to keep their official websites active. This is primarily because it is only the most prominent terrorist groups that consistently have their websites targeted for disruption.

6 Hanna Rogan, “Jihadism Online - A Study of How al-Qaida and Radical Islamist Groups Use the Internet for Terrorist Purposes,” Norwegian Defence Research Establishment, 2006.

7 For example, the majority of jihadist forums employ the popular commercial software VBulletin. This software is easier to manage than any other website design program, offering an ample variety of options to personalize the forum.

the web forums can be carried out simultaneously by a limitless number of users, who can participate in the administration anonymously. In fact, many site administrators have no connection to actual members of jihadist groups and achieved their positions

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by being “promoted” through the web forum’s roster. They achieve promotion by their commitment to write new articles, post new material, and assist with other web forum tasks. This system helps to maintain the reliability of web administration; even if senior members of the website disappear or are killed, users located all over the world can continue to keep the site operational.

Data Transfer Challenges

Use of web forums, however, did not solve the jihadists’ data transfer restrictions. Jihadist propaganda has increasingly taken the form of sophisticated video and audio statements, which require massive storage and transfer capabilities. Jihadist web forums are not capable of covering these needs. Yet, what has made these forums so successful is that they have avoided storing much of this material on their servers. Instead, to avoid data restrictions, jihadists have resorted to the same free website services used by people to illegally download movies, music, software and illegal pornography: document-sharing and file-hosting websites.⁸

The process works as follows. When a new official jihadist group notice, video or audio file is released, multiple users upload the file to various file-hosting websites, creating hundreds

8 Janko Roettgers, “Piracy Beyond P2P: One-Click Hosters,” NewTeeVee, June 17, 2007. These services include RapidShare, MegaUpload, Ziddu and others.

of URL links to where that file can be downloaded. A large list of links, or virtual library of hyperlinks, is then posted on multiple jihadist web forums. Once a user reads the post, they then duplicate the forum posting on another forum. This practice is welcomed and encouraged by the rest of the readers, which allows the original user to gain prestige and continue ascending in the forum’s “roster.”

Many of the hyperlinks expire quickly or are disabled by the file-hosting company, yet the sheer number of hyperlinks and uploads makes it difficult to completely eliminate access to the file. Moreover, jihadist website users pursue a number of practices—copied from music, movie and software pirates—to increase the duration of time that the file stays accessible. First of all, they rename the file so that it has a neutral denomination or without any apparent meaning so that hosting companies cannot identify the content of the file unless they actually view it. Second, they encrypt the file and archive with a password that is communicated on jihadist forums. By locking the file with a password, the file-hosting company’s administrators tasked with searching for such content cannot access the file themselves to review whether it is illicit. Moreover, the process can be relatively anonymous. For example, users can store the file on a portable USB device and upload it directly to the file-hosting website at an internet cafe.

The advantages of using this distribution platform exceed those found in peer-to-peer (P2P) file-sharing programs such as Kazaa, EMule and related software. By using file upload websites, rather than P2P file-sharing programs, jihadists are able to remain more anonymous. Using P2P services, for example, involves transferring a file from one computer hard drive to another. This method can be more easily traced, as seen when authorities investigate individuals involved in sharing child pornography or copyrighted music. Moreover, access to a P2P program—such as Kazaa—is difficult for jihadists who use internet cafes, as those cafes often use security software that disallows users the ability to download and install P2P software. Jihadists, for example, regularly frequent internet cafes because many do not own their own computer, or they use

cafes due to the increased anonymity they offer.⁹ These weaknesses explain why P2P software has not been the main distribution platform for jihadist media.

Conclusion

The internet continues to evolve, and it is allowing global communications to be more effective. Jihadists are constantly innovating and incorporating new technologies useful to the spread of propaganda. Moreover, the jihadist internet infrastructure is increasingly fed by an “army” of heterogeneous radicalized youth who employ various technologies to further their common cause. These youth incorporate their personal experiences—such as their search for friends through social networks to the illegal downloading of software and music—into the jihadist infrastructure, helping to maintain the reliability and sustainability of this radical content.

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Recent Highlights in Terrorist Activity

October 1, 2009 (GERMANY): German authorities arrested a 24-year-old man on suspicion of preparing explosive devices and posting al-Qa`ida propaganda on the internet. The suspect, identified as Adnan V., is a German and Turkish citizen and was arrested in the Frankfurt area. During two police raids connected to the arrest, a small amount of explosives and a possible detonator were found. Authorities also accuse the man of seeking contact with members or supporters of al-Qa`ida on the internet. – *BBC, October 2; Voice of America, October 2*

October 1, 2009 (SOMALIA): Heavy fighting broke out between rival Islamist factions in the Somali port city of Kismayo. Somali insurgent groups al-Shabab and Hisbul Islamiyya are fighting for control of the key town. – *AFP, September 30*

October 3, 2009 (AFGHANISTAN): Eight U.S. soldiers were killed during a Taliban attack on their combat outpost in the Kamdesh area of Nuristan Province in eastern Afghanistan. More than 100 Taliban fighters were killed during the ambush. – *Washington Post, October 5; AFP, October 6*

October 3, 2009 (IRAQ): Iraqi security officials announced the arrests of 140 suspected al-Qa`ida militants and other Sunni Arab fighters during a series of raids the past four days in Mosul, Ninawa Province. – *Voice of America, October 3*

October 4, 2009 (GLOBAL): Al-Qa`ida deputy Ayman al-Zawahiri appeared in a new video message vowing to kill more Westerners to avenge “crimes” against Muslims. – *AFP, October 5*

October 4, 2009 (PAKISTAN): The new leader of Tehrik-i-Taliban Pakistan (TTP), Hakimullah Mehsud, met with journalists at an undisclosed location in Pakistan’s northwest. Hakimullah was flanked by Qari Waliur Rahman and Qari Hussain, two other senior Pakistani Taliban militants. Hakimullah promised to avenge the death of Baitullah Mehsud, the former TTP leader who was killed in a U.S. missile strike in August 2009. – *BBC, October 5*

October 5, 2009 (UNITED STATES): The U.S. government will not seek the death penalty in the case of Ahmed Khalfan Ghailani, who is awaiting trial in federal court in New York. Ghailani, an alleged al-Qa`ida member charged with involvement in the 1998 U.S. Embassy bombings in Kenya and Tanzania, was indicted on a total of 286 charges, along with 224 separate counts of murder—one for each person killed in the embassy attacks. His case is scheduled for September 2010. – *CNN, October 6*

October 5, 2009 (PAKISTAN): A suicide bomber attacked a UN World Food Program office in Islamabad, killing three Pakistanis and an Iraqi national. The bomber was reportedly disguised as a Pakistani security officer. – *The Australian, October 6; Chicago Tribune, October 6*

October 5, 2009 (IRAQ): A suicide bomber detonated explosives in a funeral tent in the town of Haditha in Anbar Province. At least six people were killed. – *Voice of America, October 5*

October 6, 2009 (UNITED STATES): U.S. Attorney General Eric Holder said that the arrests of Najibullah Zazi and two other suspects disrupted “one of the most serious terrorist threats to our country since September 11, 2001.” According to Holder, “This wasn’t merely an ‘aspirational’ plot with no chance of success. This plot was very serious and, had it not been disrupted, it could have resulted in the loss of American lives.” The plot was foiled in September 2009. – *Wall Street Journal, October 6*

October 6, 2009 (IRAQ): A car bomb exploded in a residential area in Amiriyya, Anbar Province. The bomb killed at least 11 people. – *Los Angeles Times, October 7*

October 6, 2009 (PHILIPPINES): Abu Sayyaf Group fighters attacked a major military base in Sulu Province in the southern Philippines. Philippine security forces repulsed the attack, and there were no reports of casualties. U.S. soldiers are stationed at the base. – *Mindanao Examiner, October 7*

⁹ Ibid.